DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE: STP00-0000-00(311)(313)(314)
Turner Ben Hill Irwin
P.I. Nos.: 0000311 0000313 0000314
SR 107 from I-75 to SR 11/US 129

OFFICE: Engineering Services

DATE: January 28, 2010

FROM: Ronald E. Wishon, Project Review Engineer REW

TO: Bobby K. Hilliard, PE, State Program Delivery Engineer
Attn.: Peter Emmanuel

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

The VE Study for the above projects was held August 10-13, 2009. Responses were received on January 7, 2010 and revised responses were received on January 27, 2010. Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. The Project Manager shall incorporate the VE alternatives recommended for implementation to the extent reasonable in the design of the project.

ALT #	Description	Potential Savings/LCC	Implement	Comments
STP00-0000-00(311) Turner PI No. 0000311				
T-2	Use intermittent passing lanes in lieu of a four lane rural divided section from I-75 to CR 250	$24,316,393	No	The use of intermittent passing lanes does not meet the need and purpose of the project. Retaining the proposed four-lane divided typical section would promote economic development and enhance the movement of goods.
T-3	Use a 32 ft rural grassed median in lieu of a 44 ft rural grassed median	$633,902	Yes	This will be done.
T-4	Use an 18 ft raised median in lieu of a 24 ft raised median in urban sections	$148,310	Yes	This will be done.
T-6	Use 4 ft paved shoulders in lieu of 6 ½ ft paved shoulders	$741,609	Yes	This will be done.
T-8	Use 24 in curb and gutter in lieu of 30 in curb and gutter	$21,450	Yes	This will be done.

T-9	Use 11 ft inside lanes in lieu of 12 ft lanes	Proposed = $460,020 Actual = $253,000	Yes, partially	SR 107 from I-75 to CR 205 has 3 long curves that will require 12 foot lanes due to the high truck percentages. Twelve foot lanes will be used through the last curve. The final four miles of the project, up to CR 250, will use 11 foot inside lanes as proposed by the VE Team.
T-11	Extend the existing three lane section at I-75 to just east of Thompson Road	Design Suggestion	No	The VE Team believed that this design would mitigate an adverse effect on the historic house on the south side of SR 107; however, the existing edge of pavement cannot be held on the north side since a 20 ft clear zone is required for a 55 MPH speed. Using a 3 lanes section in this area would not eliminate the impacts to the historic property.
G-1	Shorten the left turn lanes to the minimum allowable deceleration length	$219,912	Yes	This will be done.
G-2	Use Type A median openings instead of Type B	$1,000,263	No	Based on traffic volumes and typical crash types along this corridor, the Office of Traffic Operations recommends the use of Type B openings along this corridor. Type B median openings perform better for both safety and operational reasons, especially at high speeds. This is mainly due to the offset nature of the left turn lane, creating better operational sight distance.
G-3	Eliminate the Firetower Road connector at Sta. 226+63 by reusing the existing intersection at Jeannette Road	$57,564	Yes	This will be done.
G-5	Block Geoghagen Road (CR 41) just to the north of proposed SR 107	$25,298	Yes	This will be done.
G-8	Minimize improvements to Live Oak Road and relocate median opening to align with Live Oak Road in its new location	$90,117	Yes	This will be done.

G-14	Eliminate median openings at Sta. 304+70 and Sta. 334+00 and replace with a single median opening at Sta. 319+35	$216,322	Yes	The median openings will be closed as proposed by the VE Team. The new median opening will be located between Sta. 315+00 and 316+00 which provides increased sight distance than Sta. 319+35.
STP00-0000-00(313) Irwin Ben Hill PI No. 0000313				
T-1	Use a three lane rural section in lieu of a four lane urban divided section	$4,059,230	No	The need and purpose for this project is focused on economic development and intermittent passing lanes would not satisfy this need. Based on the projected LOS, a four lane section is recommended for this corridor. The Chief Engineer has given approval for this project as a 4 lane GRIP style corridor.
T-2	Use intermittent passing lanes in lieu of a four lane rural divided section	$12,741,906	No	The need and purpose for this project is focused on economic development and intermittent passing lanes would not satisfy this need. The Chief Engineer has given approval for this project as a 4 lane GRIP style corridor.
T-3	Use a 32 ft rural grassed median in lieu of a 44 ft rural grassed median	$615,328	Yes	This will be done.
T-4	Use an 18 ft raised median in lieu of a 24 ft raised median in urban sections	$160,657	Yes	This will be done.
T-5	Use 12 ft urban shoulders in lieu of 16 ft urban shoulders	$93,571	Yes	This will be done.
T-6	Use 4 ft paved shoulders in lieu of 6 ½ ft paved shoulders	$653,201	Yes	This will be done.
T-7	Eliminate sidewalks from the urban section	$505,257	No	T-10 will be implemented; therefore, T-7 cannot be done.
T-8	Use 24 in curb and gutter in lieu of 30 in curb and gutter	$50,262	Yes	This will be done.

T-9	Use 11 ft inside lanes in lieu of 12 ft lanes	$659,661	No	Several factors preclude the use of 11 foot lanes on this section of the project. AASHTO recommends 12 foot lanes for higher speed designs, roadways with a significant number of curves, and relatively high truck traffic. Portions of the project will utilize a 65 MPH speed design. Truck traffic is projected to be 30%. The proposed geometry of the roadway would require tapering the inside lane from 11 feet to the required 12 feet throughout the curves. This design would be difficult to construct.
T-10	Eliminate the sidewalk from the south side of the urban section	$265,028	Yes	This will be done.
D-1	Use HDPE pipe in lieu of RCP for longitudinal drainage	$161,116	No	The contractor is incentivized to use the least expensive of the materials specified in the Pipe Culvert Materials Alternatives Chart.
G-1	Shorten the left turn lanes to the minimum allowable deceleration length	$459,878	Yes	This will be done.
G-2	Use Type A median openings instead of Type B	$759,220	No	Based on traffic volumes and typical crash types along this corridor, the Office of Traffic Operations recommends the use of Type B openings along this corridor. Type B median openings perform better for both safety and operational reasons, especially at high speeds. This is mainly due to the offset nature of the left turn lane, creating better operational sight distance.
G-17	Reduce the speed limit to 55 mph at Van Buren/Webster Road and shorten the curve radius at Sta. 364+09	Proposed = $191,880 Actual = $124,166	Yes, with modifications	Reduction of the speed design is not required in order to shorten the curve radii. A historic resource is located on the north side of SR 107 in the vicinity of this proposed recommendation. The curve radii can be reduced to a minimum of 2600 ft and still avoid impacts to the property.

STP00-0000-00(314) Turner Irwin PI No. 0000314				
T-2	Use intermittent passing lanes in lieu of a four lane rural divided section	$32,578,455	No	The use of intermittent passing lanes does not meet the need and purpose of the project. Retaining the proposed four-lane divided typical section would promote economic development and enhance the movement of goods.
T-3	Use a 32 ft rural grassed median in lieu of a 44 ft rural grassed median	$628,569	Yes	This will be done.
T-6	Use 4 ft paved shoulders in lieu of 6 ½ ft paved shoulders	$681,424	Yes	This will be done.
T-9	Use 11 ft inside lanes in lieu of 12 ft lanes	$737,105	Yes	This will be done.
B-2	Use a Type A median crossover and shorten the WB turn lane to Rebecca Waterloo Highway so it does not affect the bridge over Deep Creek	$417,850	Yes	This will be done to the extent possible. The final length and location of the bridge has not been determined, but a Type A median crossover and shorter turn lane will be implemented as described. Once the final hydraulic study is completed, any possible modifications to the bridge will be determined.
G-1	Shorten the left turn lanes to the minimum allowable deceleration length	$500,069	Yes	This will be done.
G-2	Use Type A median openings instead of Type B	$1,061,460	No	Based on traffic volumes and typical crash types along this corridor, the Office of Traffic Operations recommends the use of Type B openings along this corridor. Type B median openings perform better for both safety and operational reasons, especially at high speeds. This is mainly due to the offset nature of the left turn lane, creating better operational sight distance.
G-10	Maintain the existing alignment at Hawkins Road	$72,164	Yes	This will be done.

G-11	Maintain Eleanor Circle at the existing alignment at Sta. 313+38	$63,174	Yes	This will be done.
G-12	Maintain the existing alignment at the Big Creek/Truman Road intersection	$309,762	Yes	This will be done.
G-13	Maintain the existing alignment at Eisenhower Road	$70,778	Yes	This will be done.
G-14	Eliminate the median openings at Sta. 214+80, 258+40 and 288+00 and replace them with openings at Sta. 233+53 and 273+91	$208,687	Yes, with modifications	The number of median openings in this area will be reduced from three to two; however, the median openings will be located at Sta. 239+00 and Sta. 284+00 instead of the locations proposed by the VE Team. Sta. 273+91 is located on the bridge over the Alapaha River and shifting the opening to Sta. 284+00 locates it as far west as possible without placing the turn lanes on the bridge. Sta. 239+00 is equidistant between Hawkins Road/CR 62 and Sta. 284+00.

The Office of Engineering Services concurs with the Project Manager's responses.

Approved: Dell MRoss **Date:** 2/1/10

Gerald M. Ross, PE, Chief Engineer

REW/LLM
Attachments
c: Ben Buchan
Paul Liles/Bill Duvall/Bill Ingalsbe/Shaun Williams
Bobby Hilliard/Mike Haithcock/Peter Emmanuel/Kimberly Nesbitt
Amber Phillips
Joe Cowan
Nabil Raad
Lisa Myers
Matt Sanders

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE: STP00-0000-00(311) Turner County
SR 107 widening from I-75 to CR 250
PI No. 0000311

OFFICE: Program Delivery

DATE: January 07, 2010

FROM: Bobby K. Hilliard, P.E., State Program Delivery Engineer B.H.

TO: Ronald E. Wishon, State Project Review Engineer
ATTN: Lisa Myers

Subject: Value Engineering Study Responses

Reference is made to the recommendations that were contained in the Value Engineering Report dated August 21, 2009 for the above referenced project. Our responses and recommendations are as follows.

Value Engineering Recommendation No. T-2
Use intermittent passing lanes in lieu of a four-lane rural divided section from I-75 to CR 250. **(Cost Savings of $31,705,352)**

Response: No, the recommendation will not be implemented. The intermittent passing lanes proposed by the VE Team do not meet the project's Need and Purpose. Specifically, the recommendation would not meet the project's goal of improving the corridor for the purpose of enhancing goods movement and promoting area economic development. To assist in the accomplishment of this goal, the Need and Purpose for the project included providing four-lanes of capacity and increasing the posted speed to 65 mph in the non-urban areas. Retaining the proposed four-lane divided typical section would meet the project's need. Moreover, the Chief Engineer's email communication with the Project Manager concurred with the pursued of the four-lane design.

Value Engineering Recommendation No. T-3
Use a 32-ft wide rural grassed median in lieu of a 44-ft wide rural grassed median from STA 142+00 to STA 508+00. **(Cost Savings of $633,902)**

Response: Yes, the recommendation will be implemented.

Value Engineering Recommendation No. T-4
Use an 18-ft-wide raised median in lieu of a 24-ft-wide raised median in urban sections from STA 103+00 to STA 141+00. **(Cost Savings of $39,915)**

Response: Yes, the recommendation will be implemented.

Value Engineering Recommendation No. T-6
Use 4-ft-wide paved rural shoulders in lieu of 6 ft 6–in-wide paved rural shoulders from I-75 to CR 250. **(Cost Savings of $741,609)**

Response: Yes, the recommendation will be implemented.

Value Engineering Recommendation No. T-8
Use 24-in-wide curb and gutter in lieu of 30-in-wide curb and gutter throughout the project. **(Cost Savings of $21,450)**

Response: Yes, the recommendation will be implemented.

Value Engineering Recommendation No. T-9
Use 11-ft-wide inside lanes in lieu of 12-ft-wide inside lanes from I-75 to CR 250. **(Cost Savings of $460,020)**

Response: Yes, the recommendation will be partially implemented. The AASHTO Policy on Geometric Design of Highways and Streets, 2004, pages 208 to 215 has set forth criteria on widening roadways at curves due to truck use. SR 107 from I-75 to CR 250 has 3 long curves that would have to be widened from 11 feet to approximately 12 feet. This is mainly due to the high truck percentages. 12-foot inside lanes will be used until the end of the last curve. The final four miles, up to CR 250, will be 11-foot inside lanes. (Alternate Cost Savings of $253,000)

Value Engineering Design Suggestion No. T-11
Extend the existing three-lane section at I-75 to just east of Thompson Road. **(No cost savings associated)**

Response: No, the recommendation will not be implemented. The VE team believed that this design would mitigate an adverse effect on the historic house on the south side of SR 107. However, the existing edge of pavement cannot be held on the north side since a 20-ft clear zone is required for a 55 MPH speed. With a 14' center lane, the right-of-way would come within 36 feet of the house, and some trees would have to be removed. The historic house would still have to be moved with a three-lane section.

Value Engineering Recommendation No. G-1
Shorten the left turn lanes to the minimum allowable deceleration length throughout the project limits. **(Cost Savings of $94,248)**

Response: Yes, the recommendation will be implemented.

Value Engineering Recommendation No. G-2
Use Type A median openings in lieu of Type B throughout the project. **(Cost Savings of $1,000,263)**

Response: No, the recommendation will not be implemented. The following reasons are stated by Scott Zehngraff of the Office of Traffic Operations "Based on the traffic volumes & typical crash types along this corridor, our office cannot recommend the removal of the type B median openings on this corridor. Type B median openings perform better for both safety and operational reasons – especially at high speeds. This is mainly due to the offset nature of the left turn lane, creating better operational sight distance. Additionally, we have programmed dozens of safety projects throughout the state to convert existing Type A median openings to Type B median openings. It would not be cost efficient/effective to install Type B medians in the future at a higher cost than as part of these projects."

Value Engineering Recommendation No. G-3
Eliminate the Firetower Road connector at STA 226+63 by reusing the existing intersection at Jeanette Road. **(Cost Savings of $57,564)**

Response: Yes, the recommendation will be implemented.

Value Engineering Recommendation No. G-5
Block Geoghagen Road/CR 41 just to the north of proposed SR 107. **(Cost Savings of $25,298)**

Response: Yes, the recommendation will be implemented.

Value Engineering Recommendation No. G-8
Minimize improvements to Live Oak Road and relocate the median opening to align with Live Oak Road in its new location. **(Cost Savings of $90,117)**

Response: Yes, the recommendation will be implemented.

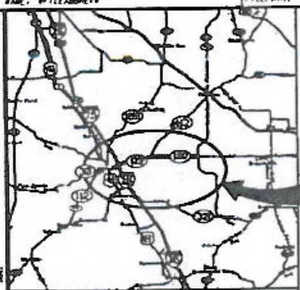
Value Engineering Recommendation No. G-14
Eliminate median openings STA 304+70 and STA 334+00 and replace with a single median opening at STA 319+35 **(Cost Savings of $216,322)**

Response: Yes, the recommendation will be partially implemented. The Subject Matter Experts has looked at the sight distance at this location and found that this location (STA 319+35) barely meets the needed 645 feet of sight distance. However, if the median was moved to between STA 315+00 and 316+00 there would be a significant increase in sight distance. The proposed median opening will be relocated between STA 315+00 and 316+00. (Cost Savings is the same)

BKH:MAH:pbe
Attachment: Project Cover Sheet

cc: Ben Buchan, Director of Engineering

COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
TURNER	STP-0000-00(311)	1	



LOCATION SKETCH

AREA OF PROJECT

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PLAN AND PROFILE OF PROPOSED SR 107/112 WIDENING FROM I-75 TO CR 250 IN ASHBURN
PROJECT NO. STP-0000-00(311)

FEDERAL AID PROJECT

P.I. No. 0000311
FEDERAL ROUTE No. N/A
STATE ROUTE No. 107/112

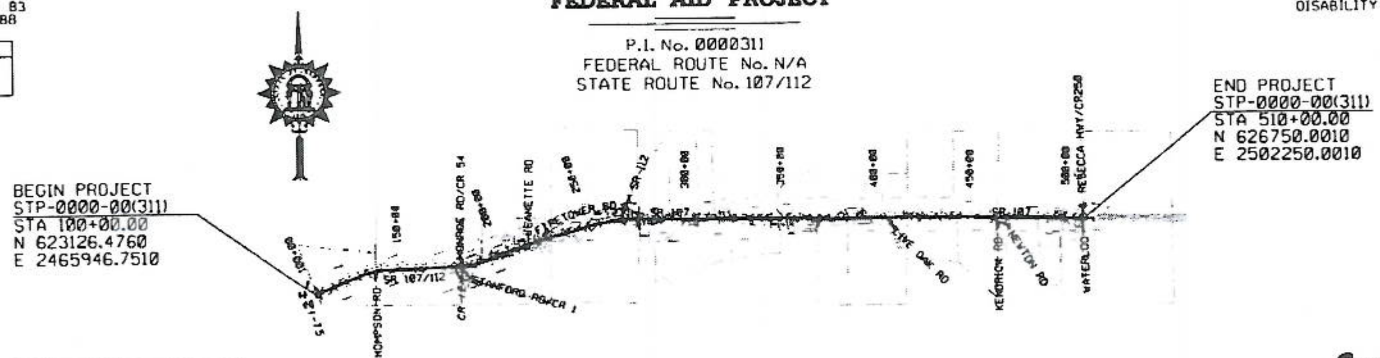
NOTE: THE COORDINATES LISTED ARE WEST ZONE GRID COORDINATES BASED ON THE GA. STATE PLANE COORDINATE SYSTEM.
HORIZONTAL DATUM : NAD 83
VERTICAL DATUM : NAVD 88

MIDPOINT COORDINATE
STATION 305+00.00
N 626881.1080
E 2481748.8550

NOTE:
THIS PROJECT HAS BEEN DESIGNED TO COMPLY WITH THE TITLE II PROVISIONS OF THE AMERICANS WITH DISABILITY ACT (ADA).

CONVENTIONAL SIGNS

STATE OR COUNTY LINE
CITY LIMIT LINE
LAND LOT LINE
PROPERTY LINE
SURVEY OR BASE LINE
RIGHT OF WAY LINE: EXISTING, REQUIRED, LIMIT OF ACCESS, R/W & LIMIT OF ACCESS, R/W MARKERS
FENCE
RAILROAD
POWER LINE
TELEPHONE LINE
POWER POLES
TELEPHONE OR TELEGRAPH POLES
CONSTRUCTION LIMITS -- CUT
CONSTRUCTION LIMITS -- FILL



PLANS PREPARED BY
Carter Burgess
1718 Peachtree Street NW, Suite 400
Atlanta, GA 30309
(404) 243-7000
Fax (404) 243-7705

THIS PROJECT IS LOCATED 100% IN TURNER COUNTY AND CONGRESSIONAL DISTRICT 8.

PROJECT DESIGNATION : STATE FUNDED
POP CLASSIFICATION : MAJOR
FUNCTIONAL CLASSIFICATION : RURAL MAJOR COLLECTOR

DESIGN DATA:
TRAFFIC A.A.D.T.: 4950 (2012)
TRAFFIC A.A.D.T.: 7400 (2032)
TRAFFIC D.H.V.: (710)
DIRECTIONAL DIST.: 56%
% TRUCKS: 20%
% 24 HR. TRUCKS: 30%
SPEED DESIGN: 55 MPH (FROM I-75 TO THOMPSON RD.)
65 MPH (FROM THOMPSON RD TO CR 250)

SCALE IN FEET: 0, 3000, 6000, 12000

NOTE:
ANY AND ALL REFERENCES TO TYPE VI SIGN SHEETING SHALL HEREBY MEAN AND BE DEEMED TO MEAN TYPE IX SIGN SHEETING FOR THIS PROJECT.

NOTE:
ANY AND ALL REFERENCES TO TYPE V SIGN SHEETING SHALL HEREBY MEAN AND BE DEEMED TO MEAN TYPE VII SIGN SHEETING FOR THIS PROJECT.

LENGTH OF PROJECT	COUNTY NO. 287 MILES
NET LENGTH OF ROADWAY	7.72
NET LENGTH OF BRIDGES	0.00
NET LENGTH OF PROJECT	7.72
NET LENGTH OF EXCEPTIONS	0.00
GROSS LENGTH OF PROJECT	7.72

DATE / STATE DESIGN ENGINEER
DATE / CHIEF ENGINEER
LOCATION AND DESIGN APPROVAL DATE
PLANS COMPLETED DATE
REVISION DATES:

NOTE:
ALL REFERENCES IN THIS DOCUMENT, WHICH INCLUDES ALL PAPERS, WRITINGS, DOCUMENTS DRAWINGS, OF PHOTOGRAPHS USED, OR TO BE USED IN CONNECTION WITH THIS DOCUMENT, TO "STATE HIGHWAY DEPARTMENT OF GEORGIA", "STATE HIGHWAY DEPARTMENT", "GEORGIA STATE HIGHWAY DEPARTMENT", "HIGHWAY DEPARTMENT", OR "DEPARTMENT" WHEN THE CONTEXT THEREOF MEANS THE STATE HIGHWAY DEPARTMENT OF GEORGIA MEAN, AND SHALL BE DEEMED TO MEAN THE DEPARTMENT OF TRANSPORTATION.

THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS, OR IN ANY WAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME ARE SHOWN AS INFORMATION ONLY, ARE NOT GUARANTEED, AND DO NOT BIND THE DEPARTMENT OF TRANSPORTATION IN ANY WAY. THE ATTENTION OF THE BIDDER IS SPECIFICALLY DIRECTED TO SUBSECTIONS 102.04, 102.05, AND 104.03 OF THE SPECIFICATIONS.

STP-0000-00(311) TURNER COUNTY

PRECONSTRUCTION STATUS REPORT FOR PI:0000311,0000313,0000314

PROJ ID : 0000311 — **SR 107/112 FROM CR 250 TO I-75 IN ASHBURN**

COUNTY : Turner
LENGTH (MI) : 7.90
PROJ NO.: STP00-0000-00(311)
PROJ MGR: Emmanuel, Peter B.
AOHD Initials: MAH
OFFICE : Program Delivery
CONSULTANT: Consultant Design (DOT contract)
SPONSOR : GDOT
DESIGN FIRM: Jacobs Civil, Inc.

MPO: Not Urban
TIP #:
MODEL YR :
TYPE WORK: Widening
CONCEPT: ADD 4R(MED 44)
PROG TYPE: Reconstruction/Rehabilitation
Prov. for ITS: N
BOND PROJ :

PRIORITY CODE:
DOT DIST: 4
CONG. DIST: 8
BIKE: N
MEASURE: E
NEEDS SCORE: 4
BRIDGE SUFF:

MGMT LET DATE :
MGMT ROW DATE :
BASELINE LET DATE:
SCHED LET DATE : 9/23/2014
WHO LETS?: GDOT Let
LET WITH :

BASE START	BASE FINISH	LATE START	LATE FINISH	TASKS	ACTUAL START	ACTUAL FINISH	%
				Concept Development	2/2/2006	8/11/2009	100
				Concept Meeting	2/2/2006	12/18/2007	100
				PM Submit Concept Report	12/15/2008	12/15/2008	100
				Receive Preconstruction Concept Approval	1/15/2009	7/7/2009	100
				Management Concept Approval Complete	**7/14/2009**	**8/11/2009**	**100**
			2/9/2010	Value Engineering Study	12/19/2007		85
				Public Information Open House Held	5/15/2007	5/15/2007	100
			4/28/2011	**Environmental Approval**	**1/30/2007**		14
		12/10/2010	2/3/2011	Pub Hear Held/Comm Resp (EA/FONSI, GEPA)			0
				Mapping	4/5/2004	5/24/2004	100
				Field Surveys/SDE	9/22/2003	4/11/2005	100
			11/4/2010	**Preliminary Plans**	**12/18/2007**		14
		1/29/2010	3/4/2010	Underground Storage Tanks			0
		1/29/2010	4/15/2010	404 Permit Obtainment			0
		5/20/2011	5/20/2011	PFPR Inspection			0
		5/23/2011	9/9/2011	R/W Plans Preparation			0
		9/12/2011	**10/13/2011**	**R/W Plans Final Approval**			**0**
		6/28/2011	6/30/2011	L & D Approval			0
		11/25/2011	11/29/2011	R/W Authorization			0
		3/7/2012	3/20/2012	Stake R/W			0
			2/25/2010	Soil Survey	9/18/2009		50
		1/29/2010	3/5/2010	Bridge Foundation Investigation			0
		6/27/2011	**4/27/2012**	**Final Design**			0
		8/20/2012	8/21/2012	FFPR Inspection			0
		9/4/2012	9/17/2012	Submit FFPR Responses (OES)			0

PROGRAMMED FUNDS

Activity	Approved	Proposed	Cost	Fund	Status	Date Auth
PE	2003	2003	1,582,709.30	Q25	AUTHORIZED	11/18/2002
ROW	LR	LR	11,844,218.32	L250	PRECST	
UTL	LR	LR	1,220,042.08	L250	PRECST	
CST	LR	LR	56,325,547.30	L250	PRECST	

PE Cost Est Amt:		Date:	
ROW Cost Est Amt:	6,021,000.00	Date:	8/11/2009
Utility Cost Est Amt:	749,000.00	Date:	8/11/2009
CST Cost Est Amt:	34,579,000.00	Date:	8/11/2009

STIP AMOUNTS

Activity	Cost	Fund
PE		Q25
ROW	4,626,000.00	L250
UTL	0.00	L250
CST	0.00	L250

PDD: OCT 1999 LR: ASSIGNED ROAD DESIGN 11/12/99. Reassigned to Consult Design 11/12/02. Not GRIP-Env & Concept only 10/1/03
Bridge: NO BRIDGE REQUIRED
Design: PBE|Need MGMT Decision on GRIP Issues|10-16-09
EIS: EA| NotApvd| NoSche'Phillips|12-2-08
LGPA: NOTIFICATION LETTER SENT 12-29-04
Programming: #1 7-05|#2 11-05
ROW:
Traffic Op: SND CNSLTNT PLNS FR REVW|030603
Utility: 1st & 2nd to DZN 2(-3) 01-07-10
EMG: 2105(H85(94)/V88);REFLY6272/04@250;DOT=M/S;D=(MH/DAY)

District Comments

PE PROJ NO: PESTP0000000311

1) Jacobs Civil Inc., contract expires 12/31/2010.
2) Economic Development project
3) Concept Report approved 8/11/2009.
4) VE Study Recommendation Held on 8/13/2009.
5) Preparing VE Study Report Responses, Waiting on Gerald Ross feedback on GRIP Issues
6) Submission of ENV. Doc depend on VE Study Recommendation Responses & Implementation result.
7) PrPP Info.: Tier# 4, Score# 13, B/C Ratio 0.03, Reduces delay by 18 hrs (VHT).

Prel. Parcel CT: 56 — **Total Parcel in ROW System:** — **Cond. Filed:** — **Acquired by:** DOT — ***DEEDS CT:***
Under Review: — **Options - Pending:** — **Relocations:** — **Acquisition MGR:**
Released: — **Condemnations- Pend:** — **Acquired:** — **R/W Cert Date:**

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE: STP00-0000-00(313), Ben Hill & Irwin Counties
PI No.: 0000313
SR 107 Widening From CR 264 to SR 11/US 129

OFFICE: Program Delivery

DATE: January 07, 2010

FROM: Bobby K. Hilliard, P.E., State Program Delivery Engineer B.H.

TO: Ronald E. Wishon, State Project Review Engineer
ATTN: Lisa Myers

SUBJECT: **Value Engineering Study Responses**

Reference is made to the recommendations that were contained in the Value Engineering Study Report dated August 21, 2009 for the above referenced project. Our responses and recommendations are as follows:

1. **Value Engineering Alternative No. T-1** – Use a 3-lane rural section in lieu of a 4-lane urban divided section from Sta 490+69 to Sta 620+45. **(Cost Savings of $4,059,230)**
   Response: ***No, the recommendation will not be implemented.***
   - *As detailed in the response for Alternative T-2, the purpose of this project is for economic development and to accommodate the amount of traffic this development may bring, therefore a four lane section is recommended. In addition, the Chief Engineer has given approval for this project as a 4 Lane GRIP style corridor.*
   - *An HCS analysis of the traffic flows within this Station range for the design year peak hour are shown below:*

Segment	2032 Build PM Peak Hour			
	3-lane		4-lane divided	
	LOS	Speed (mi/h)	LOS	Density (pc/mi/ln)
Harris Rd to Haile Booker Rd	C	49.2	A	5.0
Perry House Rd to Appomatox Rd	D	45.2	A	8.3
Walmart Dr to US 129	E	40.0	B	11.4

Based on the projected LOS for SR 107 east of Perry House Road (Sta 563+63), a four lane section is recommended. This reduces the area of a possible three lane section to only 1.4 miles in length and would create a situation where SR 107 narrows from four to three lanes for a short distance and then widens back to four lanes.

2. **Value Engineering Alternative No. T-2** – Use intermittent passing lanes in lieu of a 4-lane rural divided section from Sta 131+00 to Sta 486+00 **(Cost Savings of $12,741,906)**
   Response: ***No, the recommendation will not be implemented.***
   - *The Need and Purpose for this project is focused on Economic Development and intermittent passing lanes do not meet this need. A four lane divided section has been established through precedent on many other projects in Georgia as being the base typical section for economic development. In addition, the Chief Engineer has given approval for this project as a 4 Lane GRIP style corridor.*

3. **Value Engineering Alternative No. T-3** – Use 32-ft-wide rural grassed median in lieu of a 44-ft-wide rural grassed median from Sta 131+00 to Sta 486+00 **(Cost Savings of $615,328)**
   Response: ***Yes, the recommendation will be implemented.***

4. **Value Engineering Alternative TS-4** – Design Use 18-ft-wide raised median in lieu of a 24-ft-wide raised median from Sta 490+00 to Sta 612+50 **(Cost Savings of $160,657)**
   Response: ***Yes, the recommendation will be implemented.***

5. **Value Engineering Alternative No. T-5** – Reduce Use 12-ft-wide urban shoulders in lieu of a 16-ft-wide urban shoulders from Sta 490+00 to Sta 620+45. **(Cost Savings of $93,571)**
   Response: ***Yes, the recommendation will be implemented.***

6. **Value Engineering Alternative No. T-6** – use 4-ft-wide paved rural shoulders in lieu of 6 ft 6 in paved rural shoulders from Sta 130+80 to Sta 490+69. **(Cost Savings of $653,201)**
   Response: ***Yes, the recommendation will be implemented.***

7. **Value Engineering Alternative No. T-7** – Eliminate sidewalk from the urban section **(Cost Savings of $505,257)**
   Response: ***No, the recommendation will not be implemented.***
   - *This alternative is paired with Alternative T-10 (eliminate sidewalk on the south side of SR 107), which will be implemented.*
   - *Providing for pedestrian connectivity is worthwhile part of a roadway improvement project. The area north of SR 107 is primarily residential and providing sidewalk along SR 107 will help link these areas for pedestrians.*

8. **Value Engineering Alternative No. T-8** – use 24-in-wide curb and gutter in lieu of 30-in-wide curb and gutter throughout the project. **(Cost Savings of $50,262)**
   Response: ***Yes, the recommendation will be implemented.***

9. **Value Engineering Alternative No. T-9** – Use 11-ft-wide inside lanes in lieu of 12-ft-wide inside lanes form CR 264 to SR 11/US 129 **(Cost Savings of $659,661)**
   Response: ***No, the recommendation will not be implemented.***
   - *Exhibit 3-47 of the AASHTO Green Book recommends lane width greater than 23' of pavement for 60 mph and higher speed designs for curves with radii of less than 6000 feet, under 5500 feet for speed designs of 55 mph, and under 4500 feet for radii of speed designs of 45 mph. A large number of curves in the existing design fall within these categories, so to implement this change would require tapering the inside lane from 11 feet to the required width through curves. This design would be difficult to construct. The additional cost of the required wider lanes, using the unit cost figures and methodology of the VE Team, comes out to $82,110.85, reducing the projected cost savings from $659,661.00 to $577,550.15 as shown in Table 1.*

Table 1. Cost of Additional Width (Required Wider Lanes)

CURVE NUMBER	DESIGN SPEED (mph)	RADIUS (ft)	PC	PT	Addit'l Width Req'd	Curve Length	Add't Pavement Area (SF)	Add't Cost ($5.10/SF)
Mainline								
kc15193	65	5729.58	103+77.36	106+12.11	0.1	234.75	46.95	$239.45
kc15194	65	5729.58	122+77.36	125+12.07	0.1	234.71	46.94	$239.40
kc15197	65	5729.58	223+31.17	225+83.12	0.1	251.95	50.39	$256.99
kc15198	65	5729.58	245+69.44	248+13.45	0.1	244.01	48.80	$248.89
kc15200	65	5729.58	280+50.81	282+12.41	0.1	161.60	32.32	$164.83
kc15201	65	5729.58	289+11.38	290+65.04	0.1	153.66	30.73	$156.73
kc15202	65	2600.00	332+15.00	382+77.26	0.8	5062.26	8099.62	$41,308.04
kc15203	65	1909.85	389+83.63	405+73.94	1	1590.31	3180.62	$16,221.16
kc15204	55	5729.58	436+82.06	466+55.49	0.1	2973.43	594.69	$3,032.90
kc15205	55	5729.58	475+29.46	485+92.84	0.1	1063.38	212.68	$1,084.65
kc15206	45	11459.16	509+96.15	511+71.31	0			
kc15207	45	11459.16	541+33.93	542+89.84	0			
kc15208	45	11459.16	568+35.92	572+11.76	0			
kc15209	45	11459.16	585+68.81	588+28.22	0			
kc193	45	2490.00	602+69.87	616+93.93	0.5	1424.06	1424.06	$7,875.05
kc15212	45	2546.48	624+97.22	631+87.66	0.5	690.44	690.44	$3,818.13
							Sub-Total Additional Cost	$74,646.23
							Markup (10%)	$7,464.62
							Total Additional Cost	$82,110.85
							Original Cost Savings	$659,661.00
							Actual Cost Savings	$577,550.15

- *In addition, page 311 of the AASHTO Green Book indicates that "The extra cost of providing 12-ft lane width, over the cost of providing a 10-ft lane width is offset to some extent by a reduction in cost of shoulder maintenance and a reduction of surface maintenance due to lessened wheel concentrations at the pavement edges." So the expected cost savings is likely lower than predicted. Although, AASHTO did not give any direction as to quantifying the reduced savings, however, AASHTO make reference to additional maintenance, both to the travel lanes and shoulders, the following projection below are based on it.*

Project Length (Rural)	Inside Shoulder Width	Total Shoulder Area	Overlay Cost /SF	Resurfacing During Lifecycle	Additional Cost	Markup (10%)	Total Additional Cost
38901	2	155604	$0.78	2	$242,742.24	$24,274.22	$267,016.46

Over a lifecycle of 20 years for the project, a low end seven year repaving schedule would not require any more resurfacings than a high end ten year repaving schedule. However, due to the narrow inside lane, the inside shoulder would need to be repaved due to wear, a cost that is usually not included in a normal overlay repaving project. The additional two foot width of overlay, on both sides of the road, for the entire rural length of the project will cost $267,016.46 (without inflation) between the anticipated two resurfacing cycles, further reducing the projected cost savings to $310,533.69. While Recommendation T-9 would still provide a cost savings to the project, though less than half of the original savings, the decrease in lane width from 12-ft to 11-ft has to be weighed in value. A 12-ft lane has a greater value than the $310,533.69 difference in cost. Reference is made in the VE study that the interstates in downtown Atlanta have 11 foot lanes and operates without difficulty. However, through truck traffic is prohibited inside I-285 in Atlanta, severely limiting the amount of trucks on the road. SR 107 is projected to have 30% truck traffic, significantly higher than the percentage in downtown Atlanta.

10. **Value Engineering Alternative No. T-10** – Eliminate sidewalk from the south side of the urban section between Sta 490+69 and Sta 620+46 **(Cost Savings of $265,028)**
    Response: ***Yes, the recommendation will be implemented.***

11. **Value Engineering Alternative No. D-1** – Use High Density Polyethylene pipe in lieu of reinforced concrete pipe for longitudinal drainage sections only. **(Cost Savings of $161,116)**
    Response: ***No, the recommendation will not be implemented.***
    - *The plans for this project do not specify concrete pipe, but instead direct the contractor to the Pipe Culvert Materials Alternates Chart (Pipe Chart) that was approved as part of the soil survey on June 25, 2009. The contractor is incentivized to use the least expensive of the available options in order to have a better chance to have the winning bid.*

12. **Value Engineering Alternative No. G-1** – Shorten the left –turn lanes to the minimum allowable deceleration length throughout the project. **(Cost Savings of $459,878)**
    Response: ***Yes, the recommendation will be implemented.***

13. **Value Engineering Alternative No. G-2** – Use Type A median openings in lieu of Type B. **(Cost Savings of $759,220)**
    Response: ***No, the recommendation will not be implemented.***
    - *The following reasons are stated by Scott Zehngraff of the Office of Traffic Operations "Based on the traffic volumes & typical crash types along this corridor, our office cannot recommend the removal of the type B median openings on this corridor. Type B median openings perform better for both safety and operational reasons – especially at high speeds. This is mainly due to the offset nature of the left turn lane, creating better operational sight distance. Additionally, we have programmed dozens of safety projects throughout the state to convert existing Type A median openings to Type B median openings. It would not be cost efficient/effective to install Type B medians in the future at a higher cost than as part of these projects."*

14. **Value Engineering Alternative No. G-17** – Reduce the speed limit to 55 at Van Buren/Webster Road and shorten the curve radius. **(Cost Savings of $191,880)**
    Response: ***Yes, the recommendation will be implemented with Modifications.***
    - *Reduction of the speed design is not required in order to shorten the curve radii. The current plans show a radii of 3274' and the minimum for a 65mph design speed is 1485'.*
    - *A historic resource (Graham Family Farm) is located on the north side of SR 107 in the vicinity of this proposal and has a boundary defined as the existing edge of pavement on the north side of SR 107. The curve radii can be reduced to a minimum of 2600' and still avoid impacts to this property.*

    Proposed Alternative (2600' radius curve)
    *Full Depth Pavement = 4020(2)(26) + 650(2)(26) = 242,840 SF * $5.08 = $1,233,627*
    *Shoulder Pavement area = 2(6.5)[4020+2(650)] = 69160 SF * $3.30 = $228,228*
    Sub Total = $1,461,855
    Markup (10%) = $146,186

    *Right of Way = [4020(240) + 2(650)(240-80)]/43560 = 26.9 AC * 5,000 = $134,500*
    Right of Way Markup (155%) = $208,475

    Total = $1,951,016

    Original Cost = $2,075,182

    Proposed Alternative Savings = $124,166

BKH:MAH:pbe
Attachment: Project Cover Sheet

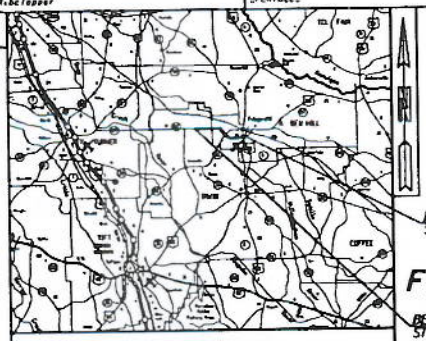
cc: Ben Buchan, Director of Engineering

12/15/2009
USER:bclapper

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	STP00-0000-00(313)	1	

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PLAN AND PROFILE OF PROPOSED
S.R. 107/TEN MILE ROAD
WIDENING AND RECONSTRUCTION
FROM CLEVELAND ROAD/C.R. 264 TO EAST OF S.R. 90 / U.S. 129 / 319

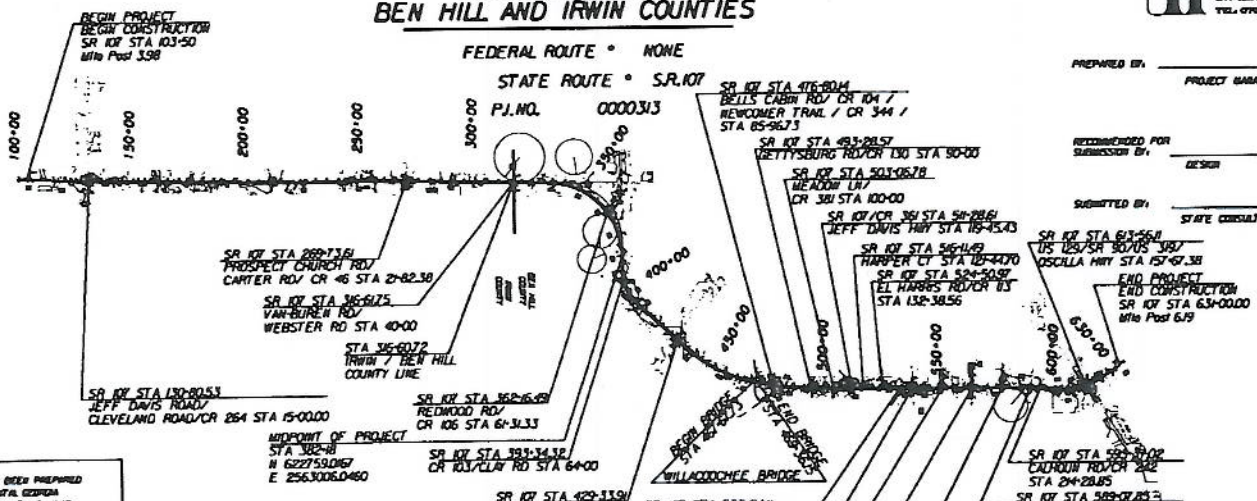


LOCATION SKETCH

FEDERAL AID PROJECT
STP00-0000-00(313)
BEN HILL AND IRWIN COUNTIES

Florence & Hutcheson, Inc.
CONSULTING ENGINEERS

FEDERAL ROUTE • NONE
STATE ROUTE • S.R.107
P.I.NO. 0000313



DESIGN DATA:	
TRAFFIC A.D.T.: (2012)	6900
TRAFFIC A.D.T.: (2032)	10950
TRAFFIC D.H.V.: AM	1125
DIRECTIONAL DIST:	50 / 50
% TRUCKS:	10 %
24 HR. TRUCKS %:	30 %
SPEED DESIGN:	65 MPH / 45 MPH

LOCATION & DESIGN APPROVAL DATE:

FUNCTIONAL CLASS:
RURAL MAJOR COLLECTOR

THIS PROJECT IS 40 % IN IRWIN COUNTY AND 60% IN BEN HILL AND IS 100% IN CONG. DIST. NO. 8.

PROJECT DESIGNATION: EXEMPT

DESIGNED IN ENGLISH UNITS.

THIS PROJECT HAS BEEN PREPARED USING THE HORIZONTAL GEORGIA COORDINATE SYSTEM OF 1984 AND GEORGIA WEST ZONE, AND THE NORTH AMERICAN VERTICAL DATUM DATED OF 1988.

NOTE:
ALL REFERENCES IN THIS DOCUMENT, WHICH INCLUDES ALL PAPERS, BIDDERS, DOCUMENTS, DRAWINGS, OR PHOTOGRAPHS USED, OR TO BE USED IN CONNECTION WITH THIS DOCUMENT, TO "STATE HIGHWAY DEPARTMENT OF GEORGIA", "STATE HIGHWAY DEPARTMENT", "GEORGIA STATE HIGHWAY DEPARTMENT", "HIGHWAY DEPARTMENT", OR "DEPARTMENT" WHEN THE CONTEXT THEREOF MEANS THE STATE HIGHWAY DEPARTMENT OF GEORGIA, AND SHALL BE DEEMED TO MEAN THE DEPARTMENT OF TRANSPORTATION.

THE DATA TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS OR IN ANY ADDENDA THEREOF, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS, HOWEVER, THE SAME ARE SHOWN AS INFORMATION ONLY, ARE NOT GUARANTEED, AND DO NOT BIND THE DEPARTMENT OF TRANSPORTATION IN ANY WAY. THE ATTENTION OF BIDDER IS SPECIFICALLY DIRECTED TO SUBSECTIONS 102.04, 102.05, AND 104.03 OF THE SPECIFICATIONS.

LENGTH OF PROJECT	IRWIN COUNTY No. 155	BEN HILL COUNTY No. 017
	STP-0000-00(313)	
	MILES	MILES
NET LENGTH OF ROADWAY	4.04	5.97
NET LENGTH OF BRIDGES	0.00	0.03
NET LENGTH OF PROJECT	0.00	0.00
NET LENGTH OF EXCEPTIONS	0.00	0.00
GROSS LENGTH OF PROJECT	4.04	6.00

PREPARED BY: _____ PROJECT MANAGER DATE

RECOMMENDED FOR SUBMISSION BY: _____ DESIGN DATE

SUBMITTED BY: _____ STATE CONSULTANT DESIGN ENGINEER DATE

DATE _____ CHIEF ENGINEER

PLANS COMPLETED

REVISIONS	

...\DGN\0000313CV01.dgn 12/15/2009 5:08:11 PM

PRECONSTRUCTION STATUS REPORT FOR PI:0000311,0000313,0000314

PROJ ID :	0000313	**SR 107 FROM W OF CR 264/IRWIN TO SR 11/US 129/BEN HILL**				**MGMT LET DATE :**	
COUNTY :	Ben Hill, Irwin		**MPO:**	Not Urban	**PRIORITY CODE:**	**MGMT ROW DATE :**	
LENGTH (MI) :	9.84		**TIP #:**		**DOT DIST:** 4	**BASELINE LET DATE:**	
PROJ NO.:	STP00-0000-00(313)		**MODEL YR :**		**CONG. DIST:** 8	**SCHED LET DATE :**	6/26/2013
PROJ MGR:	Emmanuel, Peter B.		**TYPE WORK:**	Widening	**BIKE:** N	**WHO LETS?:**	GDOT Let
AOHD Initials:	MAH		**CONCEPT:**	ADD 4R(MED 44)	**MEASURE:** E	**LET WITH :**	
OFFICE :	Program Delivery		**PROG TYPE:**	Reconstruction/Rehabilitation	**NEEDS SCORE:** 04		
CONSULTANT:	Consultant Design (DOT contract)		**Prov. for ITS:**	N	**BRIDGE SUFF:**		
SPONSOR :	GDOT		**BOND PROJ :**				
DESIGN FIRM:	Florence & Hutcheson, Inc.						

BASE START	BASE FINISH	*LATE START*	*LATE FINISH*	*TASKS*	*ACTUAL START*	*ACTUAL FINISH*	%
				Concept Development	1/10/2003	8/10/2009	100
				Concept Meeting	12/23/2005	5/31/2007	100
				PM Submit Concept Report	12/15/2008	12/15/2008	100
				Receive Preconstruction Concept Approval	1/15/2009	7/7/2009	100
				Management Concept Approval Complete	**7/14/2009**	**8/10/2009**	**100**
			2/9/2010	Value Engineering Study	12/19/2007		71
				Public Information Open House Held	5/15/2007	5/15/2007	100
			12/23/2010	**Environmental Approval**	**10/11/2007**		6
		8/6/2010	9/30/2010	Pub Hear Held/Comm Resp (EA/FONSI, GEPA)			0
				Mapping	5/26/2004	6/24/2004	100
				Field Surveys/SDE	10/21/2004	10/20/2005	100
			4/22/2010	**Preliminary Plans**	**2/16/2008**		57
				Underground Storage Tanks	9/11/2007	11/29/2007	100
		1/29/2010	4/15/2010	404 Permit Obtainment			0
		1/14/2011	1/14/2011	PFPR Inspection			0
		1/17/2011	5/6/2011	R/W Plans Preparation			0
		5/9/2011	**6/17/2011**	**R/W Plans Final Approval**			**0**
		2/22/2011	2/24/2011	L & D Approval			0
		8/1/2011	8/3/2011	R/W Authorization			0
		11/10/2011	11/23/2011	Stake R/W			0
				Soil Survey	3/19/2008	3/26/2009	100
		2/21/2011	**1/2/2012**	**Final Design**			0
		1/24/2012	1/25/2012	FFPR Inspection			0
		2/8/2012	2/21/2012	Submit FFPR Responses (OES)			0

PROGRAMMED FUNDS

Activity	Approved	Proposed	Cost	Fund	Status	Date Auth
PE	2003	2003	2,607,013.00	Q24	AUTHORIZED	11/18/2002
ROW	LR	LR	14,342,500.55	L240	PRECST	
CST	LR	LR	54,313,862.44	L240	PRECST	

PE Cost Est Amt:		Date:	
ROW Cost Est Amt:	7,291,000.00	Date:	8/11/2009
CST Cost Est Amt:	33,344,000.00	Date:	8/11/2009

STIP AMOUNTS

Activity	Cost	Fund
PE		Q24
ROW	0.00	L240
CST	0.00	L240

PDD:	OCT 1999 LR: ASSIGNED ROAD DESIGN 11/12/99. Reassigned to Consult Design 11/12/02.
Bridge:	NO BRIDGE REQUIRED
Design:	PBE|Need MGMT Decision on GRIP Issues|10-16-09
EIS:	EA| NotApvd| Not on Sched ROW| Phillips|2-2-08
LGPA:	NOTIFICATION LETTER SENT TO BEN HILL|FITZGERALD|IRWIN6-12-09.
Programming:	#1 11-05
ROW:	Preliminary Parcel Count is 120
Railroad:	CSX - warning dev. upgrade req'd.
Traffic Op:	CAH|SND CNSLTNT PLNS FR REVW030603
Utility:	SUE requested by District
EMG:	2106 (H85(94)/V88); REFLY 6274/'04@250; DOT=M/S; C=D

District Comments

PE PROJ NO: PESTP000000313

1) Florence & Hutcheson, Inc., contract expires 2/28/2010.
2) Economic Development project
3) Concept Report approved 8/11/2009
4) VE Study Recommendation Held on 8/13/2009.
5) Preparing VE Study Report Responses, Waiting on Gerald Ross feedback on GRIP Issues
6) Submission of ENV. Doc. depends on VE Study Recommendation responses & Implementation result
7) PrPP Info.: Tier# 4, Score# 16, B/C Ratio 0.02, Reduces delay by 15 hrs (VHT).

Prel. Parcel CT:	120	**Total Parcel in ROW System:**		**Cond. Filed:**		**Acquired by:**	DOT
Under Review:		**Options - Pending:**		**Relocations:**		**Acquisition MGR:**	
Released:		**Condemnations- Pend:**		**Acquired:**		**R/W Cert Date:**	

DEEDS CT:

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE: STP00-0000-00(314) Turner and Irwin Counties
Widening of SR 107 from CR 250 to CR 264
PI No. 0000314

OFFICE: Program Delivery

DATE: January 07, 2010

FROM: Bobby K. Hilliard, P.E., State Program Delivery Engineer B.H.

TO: Ronald E. Wishon, State Project Review Engineer
ATTN: Lisa Meyers

Subject: Value Engineering Study Responses

Reference is made to the recommendations that were contained in the Value Engineering Report dated August 21, 2009 for the above referenced project. Our responses and recommendations are as follows.

Value Engineering Recommendation No. T-2
Use intermittent passing lanes in lieu of a four-lane rural divided section from CR 250 to CR 264. **(Cost Savings of $36,346,926)**

Response: No, the recommendation will not be implemented. The intermittent passing lanes proposed by the VE Team do not meet the project's Need and Purpose. Specifically, the recommendation would not meet the project's goal of improving the corridor for the purpose of enhancing goods movement and promoting area economic development. To assist in the accomplishment of this goal, the Need and Purpose for the project included providing four-lanes of capacity and increasing the posted speed to 65 mph in the non-urban areas. Retaining the proposed four-lane divided typical section would meet the project's need. Moreover, the Chief Engineer's email communication with the Project Manager concurred with the pursued of the four-lane design.

Value Engineering Recommendation No. T-3
Use a 32-ft-wide rural grassed median in lieu of a 44-ft wide rural grassed median from CR 250 to CR 264. **(Cost Savings of $628,569)**

Response: Yes, the recommendation will be implemented.

Value Engineering Recommendation No. T-6
Use 4-ft wide paved rural shoulders in lieu of a 6 ft 6-in-wide paved rural shoulders from CR 250 to CR 264. **(Cost Savings of $681,424)**

Response: Yes, the recommendation will be implemented.

Value Engineering Recommendation No. T-9
Use 11-ft-wide inside lanes in lieu of 12-ft-wide inside lanes from CR 250 to CR 264. **(Cost Savings of $737,105)**

Response: Yes, the recommendation will be implemented.

Value Engineering Recommendation No. B-2
Use a Type A median crossover and shorten the westbound turn lane to Rebecca Waterloo Highway so it does not affect the bridge over Deep Creek. **(Cost Savings of $417,850)**

Response: Yes, the recommendation will be partially implemented. The final length and location of the bridge has not been determined, as a result, the recommendation cannot be fully implemented. Based on the current bridge configuration, the Subject Matter Experts concurs with this recommendation and will revise the design of the median crossover to a Type A and shorten the westbound turn lane as described. However, should the bridge need to be lengthened or shifted closer to the intersection after the final hydrological and hydraulics study is completed, the turn lane recommendation will need to be reevaluated.

Value Engineering Recommendation No. G-1
Shorten the left-turn lanes to the minimum allowable deceleration length. **(Cost Savings of $214,315)**

Response: Yes, the recommendation will be implemented.

Value Engineering Recommendation No. G-2
Use Type A median openings in lieu of Type B throughout the project. **(Cost Savings of $1,061,460)**

Response: No, the recommendation will not be implemented. The following reasons are stated by Scott Zehngraff of the Office of Traffic Operations "Based on the traffic volumes & typical crash types along this corridor, our office cannot recommend the removal of the type B median openings on this corridor. Type B median openings perform better for both safety and operational reasons – especially at high speeds. This is mainly due to the offset nature of the left turn lane, creating better operational sight distance. Additionally, we have programmed dozens of safety projects throughout the state to convert existing Type A median openings to Type B median openings. It would not be cost efficient/effective to install Type B medians in the future at a higher cost than as part of these projects."

Value Engineering Recommendation No. G-10
Maintain the existing alignment at Hawkins Road. **(Cost Savings of $72,164)**

Response: Yes, the recommendation will be implemented.

Value Engineering Recommendation No. G-11
Maintain Eleanor Circle at the existing alignment at Sta. 313+38. **(Cost Savings of $63,174)**

Response: Yes, the recommendation will be implemented.

Value Engineering Recommendation No. G-12
Maintain the existing alignment at the Big Creek/Truman Road Intersection. **(Cost Savings of $309,762)**

Response: Yes, the recommendation will be implemented.

Value Engineering Recommendation No. G-13
Maintain the existing alignment at Eisenhower Road/CR 115. **(Cost Savings of $70,778)**

Response: Yes, the recommendation will be implemented.

Value Engineering Recommendation No. G-14
Eliminate the median openings at Sta. 214+80, Sta. 258+40, and Sta. 288+00 and replace with openings at Sta. 233+53 and Sta. 273+91. **(Cost Savings of $208,687)**

Response: Yes, the recommendation will be implemented with modifications. The Subject Matter Experts agrees with the VE Team's objective of reducing the total median openings between Hawkins Road/CR 62 and Eleanor Circle West/CR 282 from three to two, and the elimination of the median openings at Sta. 214+80, Sta. 258+40, and 288+00. However, since the VE recommendation of providing median openings at Sta. 273+91 falls on the bridge over the Alapaha River, the Subject Matter Experts recommend that the median openings be located at Sta. 239+00 instead of 233+53, and Sta. 284+00 instead of 273+91. The median opening at Sta. 284+00 is located as far west as possible without pushing the turn lane tapers onto the bridge and the median opening at Sta. 239+00 is equidistant between Hawkins Road/CR 62 and Sta. 284+00. No cost savings revision is needed.

BKH:MAH:pbe
Attachment: Project Cover Sheet

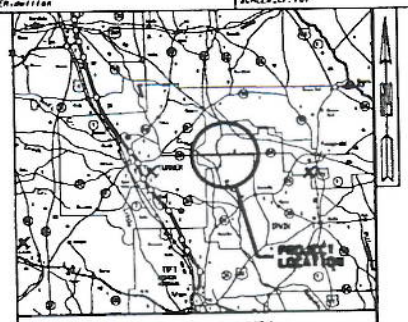
cc: Ben Buchan, Director of Engineering

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	STP-0000-00(314)	1	

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PLAN AND PROFILE OF PROPOSED
SR 107 WIDENING
FROM CR 250/TURNER
TO CR 264/IRWIN COUNTY

FEDERAL AID PROJECT
STP-0000-00(314)



LOCATION SKETCH

SCALE IN FEET
0 2500 5000 7500

NOTE :
ALL REFERENCES IN THIS DOCUMENT, WHICH INCLUDES ALL PAPERS, WRITINGS, DOCUMENTS, DRAWINGS, OR PHOTOGRAPHS USED, OR TO BE USED IN CONNECTION WITH THIS DOCUMENT, TO " STATE HIGHWAY DEPARTMENT OF GEORGIA ", "STATE HIGHWAY DEPARTMENT ", GEORGIA STATE HIGHWAY DEPARTMENT ", " HIGHWAY DEPARTMENT ", OR " DEPARTMENT " WHEN THE CONTEXT THEREOF MEANS THE STATE HIGHWAY DEPARTMENT OF GEORGIA, AND SHALL BE DEEMED TO MEAN THE DEPARTMENT OF TRANSPORTATION.

DESIGN DATA:

TRAFFIC A.D.T.:	2150 (2012)
TRAFFIC A.D.T.:	3400 (2032)
TRAFFIC D.H.V.:	330 (2032)
DIRECTIONAL DIST.:	69%
% TRUCKS:	20%
24 HR. TRUCKS %:	30%
SPEED DESIGN:	65 MPH

LOCATION & DESIGN APPROVAL DATE:

FUNCTIONAL CLASS:
RURAL MAJOR COLLECTOR

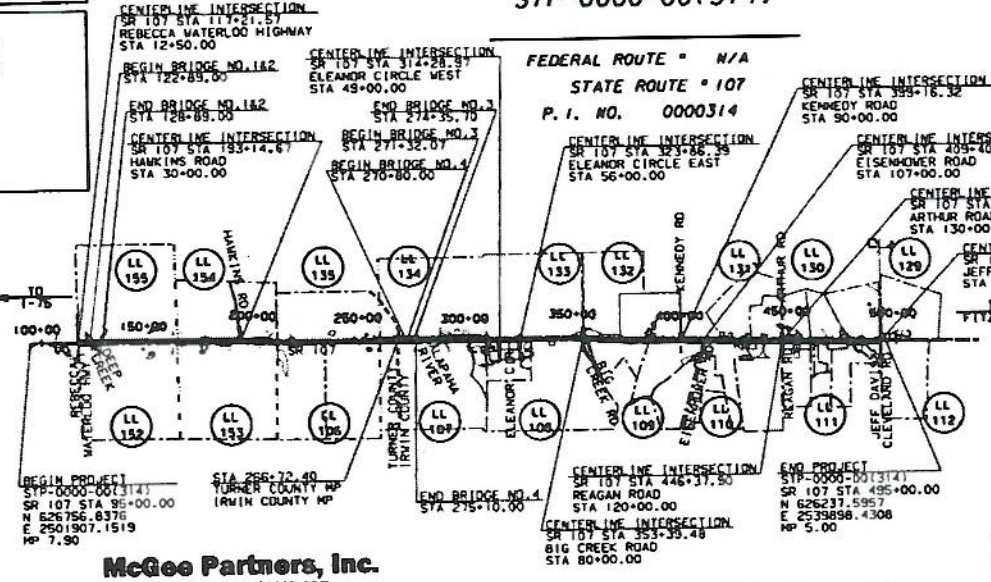
THIS PROJECT IS 40% IN TURNER COUNTY AND 60% IN IRWIN COUNTY AND IS 100% IN CONG. DIST. NO. 8.

PROJECT DESIGNATION: S.F.

DESIGNED IN ENGLISH UNITS.

THIS PROJECT WAS DESIGNED PREPARED USING THE HORIZONTAL GEORGIA COORDINATE SYSTEM OF 1994 (1983/94 WEST ZONE), AND THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.

BID-POINT COORDINATES
STA 305+00.00
N
E



McGee Partners, Inc.
www.mcgeepartners.com

JACOBS

LENGTH OF PROJECT	TURNER COUNTY Co. 257	IRWIN COUNTY Co. 153	TOTAL
Co. STP-0000-00(314)	MILES	MILES	MILES
NET LENGTH OF ROADWAY	2.817	4.265	7.082
NET LENGTH OF BRIDGES	0.057	0.058	0.115
NET LENGTH OF PROJECT	2.874	4.323	7.197
NET LENGTH OF EXCEPTIONS	0.000	0.000	0.000
GROSS LENGTH OF PROJECT	2.874	4.323	7.197

THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS OR IN REPORT INDICATED THEREBY, WHETHER BY GRAPHICS OR NOTES, OR IN ANY OTHER MANNER, ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME ARE SHOWN AS INFORMATION ONLY, ARE NOT GUARANTEED, AND DO NOT BIND THE DEPARTMENT OF TRANSPORTATION IN ANY WAY. THE ATTENTION OF BIDDER IS SPECIFICALLY DIRECTED TO SUBSECTIONS 102.04, 102.05, AND 104.03 OF THE SPECIFICATIONS.

PREPARED BY: McGee Partners, Inc.
DESIGN CONSULTANT

RECOMMENDED FOR APPROVAL BY:
DESIGN

DATE CHIEF ENGINEER

PLANS COMPLETED	
REVISIONS	

PRECONSTRUCTION STATUS REPORT FOR PI:0000311,0000313,0000314

PROJ ID : 0000314
COUNTY : Irwin, Turner
LENGTH (MI) : 7.10
PROJ NO.: STP00-0000-00(314)
PROJ MGR: Emmanuel, Peter B.
AOHD Initials: MAH
OFFICE : Program Delivery
CONSULTANT: Consultant Design (DOT contract)
SPONSOR : GDOT
DESIGN FIRM: Jacobs Civil, Inc.

SR 107 FROM CR 250/TURNER COUNTY TO CR 264/IRWIN COUNTY

MPO: Not Urban
TIP #:
MODEL YR :
TYPE WORK: Widening
CONCEPT: ADD 4R(MED 44)
PROG TYPE: Reconstruction/Rehabilitation
Prov. for ITS: N
BOND PROJ :

PRIORITY CODE:
DOT DIST: 4
CONG. DIST: 8
BIKE: N
MEASURE: E
NEEDS SCORE: 04
BRIDGE SUFF:

MGMT LET DATE :
MGMT ROW DATE :
BASELINE LET DATE:
SCHED LET DATE : 10/23/2013
WHO LETS?: GDOT Let
LET WITH :

BASE START	BASE FINISH	LATE START	LATE FINISH	TASKS	ACTUAL START	ACTUAL FINISH	%
				Concept Development	3/21/2006	8/11/2009	100
				Concept Meeting	2/2/2006	2/2/2006	100
				PM Submit Concept Report	12/15/2008	12/15/2008	100
				Receive Preconstruction Concept Approval	1/15/2009	7/7/2009	100
				Management Concept Approval Complete	**7/14/2009**	**8/11/2009**	**100**
			2/9/2010	Value Engineering Study	12/19/2007		85
				Public Information Open House Held	5/15/2007	5/15/2007	100
			4/28/2011	**Environmental Approval**	**1/30/2007**		6
		12/10/2010	2/3/2011	Pub Hear Held/Comm Resp (EA/FONSI, GEPA)			0
		3/19/2010	4/8/2010	Mapping			0
				Field Surveys/SDE	10/14/2003	8/16/2005	100
			12/30/2010	**Preliminary Plans**	**8/10/2009**		2
		1/29/2010	4/30/2010	Preliminary Bridge Design			0
				Underground Storage Tanks	9/11/2007	11/29/2007	100
		1/29/2010	4/15/2010	404 Permit Obtainment			0
		5/20/2011	5/23/2011	PFPR Inspection			0
		5/24/2011	9/12/2011	R/W Plans Preparation			0
		9/13/2011	**10/14/2011**	**R/W Plans Final Approval**			**0**
		6/29/2011	7/1/2011	L & D Approval			0
		11/28/2011	11/30/2011	R/W Authorization			0
		3/8/2012	3/21/2012	Stake R/W			0
		1/29/2010	2/1/2011	Soil Survey			0
		5/3/2010	3/30/2011	Bridge Foundation Investigation			0
		7/4/2011	**5/14/2012**	**Final Design**			0
		8/25/2011	12/14/2011	Final Bridge Plans Preparation			0
		9/4/2012	9/5/2012	FFPR Inspection			0
		9/19/2012	10/2/2012	Submit FFPR Responses (OES)			0

PROGRAMMED FUNDS

Activity	Approved	Proposed	Cost	Fund	Status	Date Auth
PE	2003	2003	1,768,780.16	Q25	AUTHORIZED	11/18/2002
ROW	LR	LR	16,583,085.94	L250	PRECST	
UTL	LR	LR	928,469.94	L250	PRECST	
CST	LR	LR	69,509,820.41	L250	PRECST	

PE Cost Est Amt:		Date:	
ROW Cost Est Amt:	8,430,000.00	Date:	8/11/2009
Utility Cost Est Amt:	570,000.00	Date:	8/11/2009
CST Cost Est Amt:	42,673,000.00	Date:	8/11/2009

STIP AMOUNTS

Activity	Cost	Fund
PE		Q25
ROW	0.00	L250
UTL	0.00	L250
CST	0.00	L250

PDD: Reassigned to Consult Design 11/12/02. Not GRIP - Envir & Concept Only. 10/1/03.
Bridge: BRIDGE REQUIRED
Design: PBE|Need MGMT Decision on GRIP Issues|10-16-09
EIS: EA| NotApvd| NoSchedROW| Phillips12-2-08
LGPA: NOTIFICATION LETTER SENT TO IRWIN & TURNER 6-12-09.
Programming: #1 7-05|#2 1-06
ROW: Preliminary Parcel Count is46
Traffic Op: CAH|SND CNSLTNT PLNS FR REVW030603
Utility: 1st Sub to DZN (3) 10-02-09
EMG: 2107 (H85(94)/V88); REFLY 6273/04@250; DOT=M/S; C=D

District Comments

PE PROJ NO: PESTP000000314

1) Jacobs Civil Inc., contract expires 12/31/2010.
2) Economic Development project
3) Concept Report approved 8/11/2009.
4) VE Study Recommendation Held on8/13/2009.
5) Preparing VE Study Report Responses, Waiting on Gerald Ross feedback on GRIP Issues
6) Submission of ENV. Doc depend on VE Study Recommendation Responses & Implementation result.
7) PrPP Info.. Tier# 4, Score# 11, B/C Ratio 0.01, Reduces delay by 8 hrs (VHT).

Prel. Parcel CT: 46
Total Parcel in ROW System:
Cond. Filed:
Acquired by: DOT
DEEDS CT:
Under Review:
Options - Pending:
Relocations:
Acquisition MGR:
Released:
Condemnations- Pend:
Acquired:
R/W Cert Date: